

Application No. 09/870,498

Amendment dated January 31, 2008

Reply to Office Action of October 31, 2007

Docket No.: NY-PAESP 203-US

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AMENDMENTS TO THE CLAIMS

- Claim 1. (Withdrawn) A method for identifying an antimicrobial peptide which binds to an infective stage microorganism and damages said microorganism comprising
- (a) contacting an infective stage microorganism with a plurality of non-identical peptides of claim 5,
 - (b) identifying peptides that bind to the microorganism, and
 - (c) assaying the peptides identified in (b) for capacity to damage the microorganism,
- wherein damage to said microorganism by a peptide of (c) indicates that the peptide of (c) is an antimicrobial peptide which binds to an infective stage microorganism and damages said microorganism.
- Claim 2. (Withdrawn) The method of claim 1, wherein the plurality of peptides is expressed on a bacteriophage.
- Claim 3. (Withdrawn) The method of claim 1, comprising contacting said microorganism with a library of synthetic peptides.
- Claim 4. (Withdrawn) The method of claim 1, wherein the microorganism is a protozoa, a fungus, a gram positive bacterium or a gram negative bacterium.
- Claim 5. (Currently amended) An isolated antimicrobial peptide consisting of from 10 to about 50 amino acids, wherein said peptide comprises 10 to ~~about~~ 12 contiguous amino acids of which 7 out of the said 10 to ~~about~~ 12 amino acids are hydrophobic residues, 3 of the said 10 to ~~about~~ 12

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contiguous amino acids are basic residues and at least one of the said 10 to about 12 amino acids is histidine (His), glutamic acid (Glu) or serine (Ser), with the proviso that two of the hydrophobic amino acids must be tryptophan (Trp) residues and said two tryptophan residues are adjacent tryptophans (Trp).

Claim 6. (Previously presented) The isolated antimicrobial peptide of claim 5, comprising the amino acid sequence set forth in SEQ ID NO: 1.

Claim 7. (Original) The isolated antimicrobial peptide of claim 5, wherein said peptide is amidated, carboxymethylated or cyclized.

Claim 8. (Canceled)

Claim 9. (Canceled)

Claim 10. (Canceled)

Claim 11. (Canceled)

Claim 12. (Canceled)

Claim 13. (Canceled)

Claim 14. (Canceled)

Claim 15. (Canceled)

Claim 16. (Canceled)

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- Claim 17. (Withdrawn) A method for preventing growth, inhibiting growth or decreasing viability of a microorganism comprising contacting said microorganism with an effective amount of the polypeptide of claim 5, sufficient to prevent growth, to inhibit growth or to decrease viability of said microorganism.
- Claim 18. (Withdrawn) The method of claim 17, wherein said microorganism is a protozoa or a fungus.
- Claim 19. (Withdrawn) The method of claim 17, wherein said microorganism is present in an environment that is capable of sustaining viability of the microorganism.
- Claim 20. (Withdrawn) The method of claim 19 wherein said environment is a water sample, a food product, a feed, an animal or a plant.
- Claim 21. (Withdrawn) The method of claim 18, wherein the protozoa is an Eimeria species, a Toxoplasma species, a Crithidia species, or a Trypanosoma species.
- Claim 22. (Withdrawn) The method of claim 18, wherein the fungus is selected from the group consisting of Candida albicans or Aspergillus nidulans, Colletotrichum gossypii, Alternaria macrospora, Bipolaris sorokiniana, Dreschlera tritici, Phoma sorghina, Microdochium oryzae, Bipolaris oryzae, Pyricularia grisea, Colletotrichum gloeosporioides, Rhizoctonia solani and Fusarium solani.
- Claim 23. (Withdrawn) The method of claim 18, wherein the protozoa is selected from the group consisting of E. acervulina or E. tenella.

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- Claim 24. (Withdrawn) A method for treating an organism infected with a pathogenic microorganism comprising administering an effective amount of the isolated antimicrobial peptide of claim 5 to said organism sufficient to alleviate said infection.
- Claim 25. (Withdrawn) The method of claim 24, wherein said organism is a bird, a mammal or a plant.
- Claim 26. (Withdrawn) The method of claim 24, wherein the pathogenic microorganism is a fungus or a protozoa.
- Claim 27. (Withdrawn) The method of claim 26, wherein the protozoa is an Eimeria or a Toxoplasma.
- Claim 28. (Withdrawn) The method of claim 26, wherein the fungus is selected from the group consisting of *Candida albicans*, *Aspergillus nidulans*, *Colletotrichum gossypii*, *Alternaria macrospora*, *Bipolaris sorokiniana*, *Drechslera tritici*, *Phoma sorghina*, *Microdochium oryzae*, *Bipolaris oryzae*, *Pyricularia grisea*, *Colletotrichum gloeosporioides*, *Rhizoctonia solani* and *Fusarium solani*.
- Claim 29. (Canceled)
- Claim 30. (Canceled)
- Claim 31. (New) The isolated peptide of claim 5, comprising the amino acid sequence set forth in SEQ ID NO: 1, 2, 3, or 4.